

Application # 09/966,505
Response dated March 9, 2005
Reply to Office Action dated September 9, 2004

PATENT
P-2776P1P1P1P1

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for detecting oxygen consumption in a test sample comprising:

(a) exposing a test sample to a first sensor composition and a control sample to a second sensor composition, said first and second sensor compositions comprising a luminescent compound being inhibited from generating a detectable signal in the presence of an inhibitory amount of oxygen and which generates a detectable signal as the inhibitory amount of oxygen is reduced;

(b) determining the strength of a first said detectable signal ~~signals~~ generated by said first sensor ~~composition~~ ~~compositions~~ ~~exposed to test and control samples~~ at time intervals

(c) determining the strength of a second said detectable signal generated by said second sensor composition at said time intervals;

(e) ~~(d) comparing the strengths of said first signal ~~signals~~ generated from the sensor composition exposed to the test sample with the said second signal ~~signals~~ generated by the sensor composition exposed to said control sample over said time intervals and determining whether oxygen in the said test sample has been consumed.~~

2. (Original) The method according to claim 1, wherein said comparing comprises calculating an area between a sample and a control curve and comparing said area to zero.

3. (Currently Amended) The method according to claim 1, wherein said first and second signals are normalized.

4. (Original) The method of claim 1, wherein said luminescent compound is contained within a matrix which is relatively impermeable to water and non-gaseous solutes, but which is permeable to oxygen.

5. (Original) The method of claim 4, wherein said matrix is a rubber or plastic matrix.

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6. (Original) The method of claim 4, wherein said matrix is a silicone rubber matrix.
7. (Original) The method of claim 1, wherein said luminescent compound is a tris-4,7-diphenyl-1,10-phenanthroline ruthenium (II) salt.
8. (Original) The method of claim 7, wherein said luminescent compound is tris-4,7-diphenyl-1,10-phenanthroline ruthenium (II) chloride.
9. (Original) The method of claim 1, wherein said luminescent compound is a tris-2,2'-bipyridyl ruthenium (II) salt.
10. (Original) The method of claim 9, wherein said luminescent compound is tris-2,2'-bipyridyl ruthenium (II) chloride hexahydrate.
11. (Original) The method of claim 1, wherein said luminescent compound is 9,10-diphenyl anthracene.
12. (Currently Amended) ~~A method according to~~ The method of claim 1, wherein said test sample and said control sample are substantially isolated from atmospheric oxygen.
13. (Currently Amended) ~~A method according to~~ The method of claim 1, wherein said test sample comprises a reaction mixture of at least one enzyme which catalyzes oxidative reactions, admixed with a quantity of at least one drug, toxin or chemical.
14. (Original) The method of claim 13, wherein said at least one enzyme comprises enzymes in liver cells.
15. (Original) The method of claim 13, wherein the at least one enzyme comprises a cytochrome P450 enzyme.
16. (Withdrawn) An article of manufacture comprising: computer useable medium and

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computer readable code embodied on said computer useable medium for detecting oxygen consumption in a test sample wherein the computer readable code: (a) is configured to receive of a plurality of signals generated at time intervals by a sensor composition exposed to a test sample and a sensor composition exposed to a control sample, wherein said sensor composition comprises an oxygen sensitive luminescent compound, said luminescent compound being inhibited from generating a detectable signal in the presence of an inhibitory amount of oxygen and which generates a detectable signal as the inhibitory amount of oxygen is reduced, said signals being provided by a user; (b) computer readable program code devices configured to cause the computer to effect the comparing of the strengths of said signals generated from the sensor composition exposed to the test sample with the signals generated by the sensor composition exposed to said control sample over said time intervals and determining whether oxygen in the test sample has been consumed.

17. (Withdrawn) The article of manufacture according to claim 16, wherein said comparing comprises calculating an area between a sample and a control curve and comparing said area to zero.

18. (Withdrawn) The article of manufacture according to claim 16, wherein said signals are normalized.

19. (Currently Amended) A method in a computer system for detecting oxygen consumption in a test sample comprising:

(a) presenting a prompt to a user requesting a submission of at least two signals generated at time intervals, the first said signal generated by a first sensor composition exposed to a test sample and the second said signal generated by a second sensor composition exposed to a control sample, said first and second sensor compositions comprising an oxygen sensitive luminescent compound, said luminescent compound being inhibited from generating a detectable signal in the presence of an inhibitory amount of oxygen and which generates a detectable signal as the inhibitory amount of oxygen is reduced;

(b) determining strengths of said first and said second signals generated by said sensor composition compositions exposed to test and control samples at time intervals;

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(c) comparing the strengths of said first signal ~~signals generated from the sensor composition exposed to the test sample with said second signal~~ the signals generated by the sensor composition exposed to said control sample over said time intervals and determining whether oxygen in the said test sample has been consumed; and

(d) indicating to the user if the difference between said first signal and said second signal ~~said signals~~ indicate the consumption of oxygen in the test sample.

20. (Original) The method according to claim 19, wherein said comparing comprises calculating an area between a sample and a control curve and comparing said area to zero.

21. (Currently Amended) The method according to claim 19, wherein said first and second signals are normalized.